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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte STEPHEN RAWLE¹

Appeal 2009-1801
Application 10/798,112
Technology Center 3700

Decided²: April 15, 2009

Before WILLIAM F. PATE, III, MICHAEL W. O'NEILL, and DANIEL S. SONG, *Administrative Patent Judges.*

SONG, *Administrative Patent Judge.*

DECISION ON APPEAL

¹ The real party in interest is The Gillette Company (App. Br. 1).

² The two month time period for filing an appeal or commencing a civil action, as recited in 37 CFR § 1.304, begins to run from the decided date shown on this page of the decision. The time period does not run from the Mail Date (paper delivery) or Notification Date (electronic delivery).

STATEMENT OF THE CASE

The Appellant appeals under 35 U.S.C. § 134 (2002) from a Final Rejection of claims 1-8 and 11-20. Claims 9 and 10 have been canceled. We have jurisdiction under 35 U.S.C. § 6(b) (2002).

The Appellant claims a shaving razor blade unit having a group of at least five parallel blades, each blade having a length of less than 1 mm.

Representative independent claim 1 reads as follows (App. Br., Claims App'x.; emphasis added):

1. A shaving razor blade unit comprising
a housing, and

a group of *at least five parallel blades* supported by said housing, the distance from the cutting edge of a first blade of said group to a last blade of said group being between 3.8 mm and 4.6 mm,

wherein the blades (28) are each mounted on respective support members (400) that are each movably mounted on said housing, each of said support members (400) having a blade platform portion (406) for supporting the respective blade (28) and a depending base portion (402) angled relative to the blade platform portion (406),

said depending base portions being arranged generally perpendicular to an imaginary shaving surface approximately intersecting the blade cutting edges (408), and wherein

the blades (28) have a blade length (LB) extending rearward from the cutting edge (408), *said blade length (LB) being less than 1 mm.*

The prior art relied upon by the Examiner in rejecting the claims is:

Gooding Gilder et al.	US 4,200,976 US 6,212,777 B1	May 6, 1980 Apr. 10, 2001
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The Examiner rejected claims 1-8 and 11-20 under 35 U.S.C. § 103(a) as unpatentable over Gilder and Gooding.

We AFFIRM.

ISSUE

Whether the Appellant has shown that the Examiner erred in rejecting claims 1-8 and 11-20 as unpatentable over Gilder and Gooding which turns on whether it would have been obvious to one of ordinary skill in the art to provide a shaving razor blade unit with five blades, each blade having a length of less than 1 mm.

FINDINGS OF FACT

The record supports the following findings of fact (FF) by a preponderance of the evidence.

1. Gilder describes a safety razor blade unit (i.e., shaving razor blade unit) including a frame 1 (i.e., housing) and a shaving surface defined by three blades (primary, secondary, and tertiary blades 11-13) carried by the frame 1 (col. 1, ll. 37-44; col. 2, ll. 63 – col. 3, ll. 8; figs. 1 and 2; Ans. 6).

2. Gilder describes span S₂ of the secondary blade 12 and the span S₃ of the tertiary blade 13 as having values in the range of 1.0 to 2.0 mm (col. 3, ll. 25-33). Thus, in Gilder, the distance from the cutting edge of the first blade of the group to the last blade is 2.0 to 4.0 mm.

3. Figs. 1 and 2 of Gilder depict blades 11-13 mounted on respective support members (not numbered), each of the support members

having a blade platform portion (not numbered) for supporting the respective blade and a depending base portion (not numbered) angled relative to the blade platform portion (figs. 1 and 2).

4. Gilder describes blades capable of movement (i.e., are movably mounted) (col. 1, ll. 45-49).

5. Fig. 1 of Gilder depicts the depending base portions (not numbered) as being arranged generally perpendicular to a common plane P (i.e., an imaginary shaving surface) approximately intersecting the blade cutting edges (fig. 1).

6. Figs. 1 and 2 of Gilder depict the blades 11-13 having a length extending rearwardly from the cutting edge (figs. 1 and 2), but does not describe the dimension of this length.

7. Gilder explicitly teaches that “[a] blade unit having many blades can produce a closer shave than a similar blade unit with only one or two blades” (col. 1, ll. 19-21).

8. Gooding discloses a shaving razor blade unit, the unit including blades that are “narrow, being for example within the range of 0.8 to 2.0 millimeters, preferably 1.25 millimeters” in length (col. 2, ll. 12-14).

PRINCIPLES OF LAW

“Section 103 forbids issuance of a patent when ‘the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.’” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398,

127 S.Ct. 1727, 1734 (2007). The question of obviousness is resolved on the basis of underlying factual determinations including (1) the scope and content of the prior art, (2) any differences between the claimed subject matter and the prior art, (3) the level of skill in the art, and (4) where in evidence, so-called secondary considerations. *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 17-18 (1966).

In *KSR*, the Supreme Court emphasized “the need for caution in granting a patent based on the combination of elements found in the prior art,” and reaffirmed principles based on its precedent that “[t]he combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.” *KSR*, 127 S.Ct. at 1739.

The Court further explained:

When a work is available in one field of endeavor, design incentives and other market forces can prompt variations of it, either in the same field or a different one. If a person of ordinary skill can implement a predictable variation, §103 likely bars its patentability. For the same reason, if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill.

Id. at 1740. The operative question is “whether the improvement is more than the predictable use of prior art elements according to their established functions.” *Id.*

The Court noted that “[t]o facilitate review, this analysis should be made explicit.” *Id.* at 1731, citing *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006) (“[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness”). However, “the analysis need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ.” *KSR*, 127 S.Ct. at 1741.

ANALYSIS

Claims 1-8 and 11-20

The Examiner rejects all of the claims as unpatentable over Gilder and Gooding. The Examiner finds that Gilder describes all of the claimed limitations recited in independent claims 1 and 11 except for the recited “at least five parallel blades” and the blade length of less than 1 mm (FF 1-6; Ans. 3-5). To cure these deficiencies of Gilder, the Examiner relies on (i) the specific teachings of Gilder that many blades can produce a closer shave in order to provide the three-bladed Gilder unit with two additional blades (FF 7); and (ii) Gooding which describes a blade length within the range of 0.8 to 2.0 millimeters, preferably 1.25 millimeters (FF 8), to conclude that all of the claims would have been obvious to one of ordinary skill in the art (Ans. 4-5).

The Appellant argues the rejected claims together as a group in the Appeal Brief except for dependent claims 12-15 for which additional

arguments are submitted (App. Br. 4-8). Thus, we select representative claim 1 to decide the appeal of claims 1-8, 11, and 16-20, these claims standing or falling together. *See 37 C.F.R. § 41.37(c)(1)(vii).*

We begin our analysis by focusing on the disputed limitation requiring a group of at least five parallel blades. Drawing on Gilder's teachings, the Examiner finds that it would have been obvious to one of ordinary skill in the art to provide the three-bladed Gilder unit with two additional blades to produce a closer shave (Ans. 4-6).

The Appellant initially takes issue with the Examiner's position regarding whether Gilder teaches the use of additional blades to produce a closer shave (App. Br. 4-5). Specifically, the Appellant contends that the Examiner fails to consider Gilder's teaching that adding blades increases frictional drag forces, which in turn, reduces shave quality (App. Br. 5). In light of this teaching, the Appellant argues that one of ordinary skill in the art would not be motivated to implement a five blade unit in view of Gilder's teachings regarding frictional drag (App. Br. 5). The Appellant further argues that the basic principle of Gilder would change with the addition of more blades, and thus, require a wholesale redesign of the razor described in Gilder (App. Br. 5).

Firstly, we note that every claim on appeal is silent as to frictional drag forces (App. Br., Claims App'x.). The substance of the Appellant's argument is that there is a competing reason (i.e., increased frictional drag forces) that factors against a person of ordinary skill in the art adding two blades to Gilder's three blade unit. While adding two blades may increase the frictional drag forces, this fact is not dispositive. *See Medicem, S.A. v.*

Rolabo, S.L., 437 F.3d 1157, 1165 (Fed. Cir. 2006) (“[A] given course of action often has simultaneous advantages and disadvantages, and this does not necessarily obviate motivation to combine”); *see also Winner Int'l Royalty Corp. v. Wang*, 202 F.3d 1340, 1349 n. 8 (Fed. Cir. 2000) (“The fact that the motivating benefit comes at the expense of another benefit, however, should not nullify its use as a basis to modify the disclosure of one reference with the teachings of another. Instead, the benefits, both lost and gained, should be weighed against one another.”).

As discussed above, Gilder describes why a person of ordinary skill in the art would find it desirable to use additional blades, even when doing so might increase frictional drag forces. In particular, Gilder explicitly teaches the use of many blades to produce a closer shave (FF 7) despite the purported increase in frictional drag forces. Hence, the prior art of record suggests that increase in drag forces may be acceptable in view of the realized benefit of a closer shave. Thus, while these competing considerations (closer shave vs. increased frictional drag forces) would likely be weighed by one of ordinary skill in the art, the mere existence of competing considerations does not establish nonobviousness of a shaving razor blade unit having a group of at least five parallel blades.

Regarding the second argument, the Appellant incorrectly applies the law in contending that the basic principle of the Gilder unit would be changed with two additional blades. *See In re Ratti*, 270 F.2d 810, 813 (CCPA 1959) (“This suggested combination of references would require a substantial reconstruction and redesign of the elements shown in [the primary reference] as well as a change in the *basic principles* under which

the [primary reference] construction was designed to operate.” (Emphasis added)). In *Ratti*, the modification suggested by the Examiner changed the basic principle of sealing from attaining sealing through a rigid, press-fit, interface between the components, to attaining sealing by providing a resilient interface between the components. *Id.* at 811-13. Such a modification fundamentally changes the technical basis of how a seal performs its sealing function and how a sealed interface is attained. Thus, “a change in the basic principles” refers to change that is fundamental in scope so as to relate to scientific or technical principles under which the invention is designed to operate. It cannot be said that “change in the basic principles” occurs by any modification of a prior art device.

We are not persuaded that “change in the basic principles” occurs by the addition of two blades to the Gilder shaving unit with three blades. In setting forth the rejection of independent claim 1, the Examiner does not call for any modification to the described blade arrangement of Gilder beyond that which is already practiced in the art so as to change its manner of function or operation. The two additional blades would operate in substantially the same way as the existing blades of Gilder, but would simply improve the overall performance of the Gilder shaving unit (i.e., by providing a closer shave). Therefore, because merely increasing the number of blades does not change the technical, basic principle under which the Gilder shaving unit operates, we find the Appellant’s argument to the contrary unpersuasive.

Regarding the Appellant’s argument that a “wholesale redesign” would be required, it is our view that the Appellant’s argument does not take

into account the teachings of Gilder or the knowledge and skill of one of ordinary skill in the art, and therefore, is ineffective to rebut the Examiner's prima facie case of obviousness. *See In re Keller*, 642 F.2d 413, 425 (CCPA 1981) ("The test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art").

While the addition of the two blades to Gilder's shaving unit may require modification to the size of the housing of Gilder to accommodate the two additional blades, we do not believe, nor has the Appellant shown, that such modification would be beyond the technical skill of one of ordinary skill in the art. The Examiner specifically articulated that based on the teachings of Gilder, "it would have been obvious to one skilled in the art at the time this invention was made to modify Gilder et al. by providing the three-bladed razor blade unit with two additional blades for a closer shave as desired" (Ans. 4). Hence, in the present case, the Examiner relies on the specific teachings in Gilder to provide the motivation for increasing the number of blades in the Gilder razor unit, that is, the known "advantage of having more blades for producing a closer shave" as taught in Gilder³ (Ans. 6). The Appellant has not provided any persuasive arguments or evidence to

³ The Examiner also refers to U.S. Patent Application Publication No. 2004/0128835 to Coffin as evidence that the number of blades in a razor unit is an obvious matter of choice (Ans. 7). However, Coffin is not relied upon for claim rejections, and thus, is not considered in the present Appeal.

rebut the Examiner's conclusion that adding additional blades to the three-bladed Gilder unit would have been obvious and/or that providing such additional blades is beyond the technical skill of one of ordinary skill in the art.

With respect to the limitation of independent claims 1 and 11 reciting a blade length of less than 1 mm, the Appellant concedes that this limitation falls within the 0.8 to 2.0 mm range disclosed in Gooding (App. Br. 6-7; FF 8). Nonetheless, the Appellant again contends that it would not have been obvious to a person of ordinary skill in the art to combine Gilder and Gooding because doing so would require redesign of the Gilder blade unit geometry (App. Br. 7). However, the Appellant's redesign arguments are not persuasive for the substantially the same reasons discussed above.

Moreover, in rejecting these claims, the Examiner reasoned that a person of ordinary skill in the art would find the combination of Gilder and Gooding desirable "to facilitate passing of shaving debris through the shaving unit and to accommodate a greater number of blades for a given width of the shaving unit" (Ans. 5). The Appellant argues that "[t]he main purpose of disclosing a narrow blade width for use in the Gooding device is to allow hair to pass through the open frame structure" which one of ordinary skill would recognize as being inapplicable to the blade support structure of Gilder which extends along the length of each blade (App. Br. 6 and 7).

However, we first note that Gilder does not disclose a length dimension for the blades (FF 6). Hence, one of ordinary skill would look to other teachings in the related art, such as Gooding, for the dimensions for the

blades which would render the claimed limitation obvious (FF 8). Secondly, the Appellant's argument is not persuasive because we fail to see how the length dimension of the blades *would not* impact the manner in which the shaving debris is passed through the shaving unit. For instance, the gap between each of the blades/supports which allow passage of shaving debris can be reduced by the length dimension of the blades. Thus, we find the Examiner's articulated reason to be rational and sufficient to support the conclusion of obviousness (Ans. 4-5; FF 8).

In view of the above, the Appellant's claimed shaving razor blade unit having a group of at least five parallel blades, each blade having a length of less than 1 mm, would have been obvious because it is a predictable variation of the prior art which is improved using the known technique of providing additional blades, and hence, "is likely the product not of innovation but of ordinary skill and common sense." KSR, 127 S. Ct. at 1740, 1742. Thus, the Appellant has not shown that the Examiner erred in rejecting claims 1-8, 11, and 16-20 under 35 U.S.C. § 103(a) as unpatentable over Gilder and Gooding.

Claims 12-15

The Appellant presents substantially the same arguments submitted relative to independent claims 1 and 11 for arguing the patentability of dependent claims 12-15 which recite that the blade length is either less than 0.9 mm, or about 0.85 mm (App. Br. 7-8). The Appellant contends that the Examiner failed to provide a sufficient reason as to why one of ordinary skill in the art would modify the Gilder razor unit based on the teachings of

Gooding to have a blade length recited in these claims (App. Br. 7). However, as the Appellant again concedes, the blade lengths recited in dependent claims 12-15 fall within the range disclosed in Gooding (App. Br. 7-8; FF 8). Thus, for the same reasons discussed above, the Appellant's arguments are unpersuasive. The Examiner has clearly articulated a rational reason for combining Gooding with Gilder which is sufficient to support the conclusion of obviousness. The Appellant has not shown that the Examiner erred.

CONCLUSION

The Appellant has not shown that the Examiner erred in rejecting claims 1-8 and 11-20 as unpatentable over Gilder and Gooding.

ORDER

The Examiner's rejection of claims 1-8 and 11-20 is AFFIRMED.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 1.136(a)(1)(iv) (2007).

AFFIRMED

rvb

Appeal 2009-1801
Application 10/798,112

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